

Abstract

A fuel booster operable to compress a combustible fuel, the fuel booster comprising a compressor housing, a compressor rotor, and a seal assembly coupled to the compressor housing. The seal assembly and the compressor housing cooperate to at least partially define a hermetically sealed compressor chamber. A motor housing is coupled to the seal assembly. The motor housing and seal assembly cooperate to at least partially define a motor chamber that is sealed from the compressor chamber to prevent fluid flow therebetween. The fuel booster also includes a motor having a motor rotor and a motor stator. The motor rotor and the compressor rotor are contained within the compressor chamber. The motor rotor includes a cylindrical surface. The motor stator substantially surrounds the cylindrical surface and is contained within the motor chamber.